

WHAT IS CLAIMED IS:

1. A switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers, and can be remote-controlled over a network,
the switching device comprising:
a network interface circuit to be connected to the network;
an image processing unit that includes an image compression circuit for compressing image signals outputted from the computers; and
a controller that changes a compression method or compression rate to be used at the image compression circuit, in accordance with a congestion level of the network.
2. The switching device as claimed in claim 1, further comprising a packet filtering circuit that adds up a packet data amount received through the network interface circuit.
3. The switching device as claimed in claim 1, comprising a plurality of image processing units and a plurality of remote-control computers that can be connected to the network, the number of the image processing units being the same as the number of the remote-control computers.
4. The switching device as claimed in claim 1, wherein the controller reports the changed compression method or compression rate to a remote-control computer.
5. A switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers, and can be remote-controlled over a network,

the switching device comprising
a controller that makes the computers recognize a
mouse, connected to a remote-control computer over the
network, as an absolute value device.

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6. The switching device as claimed in claim 5,
wherein the controller is a USB controller.

7. A switching device that selectively
10 switches connections to a predetermined terminal among
a plurality of terminals connected to computers, and
can be remote-controlled over a network,

the switching device comprising:

a function that receives mouse coordinates of a
15 mouse connected to a remote-control computer over the
network;

a function that calculates the difference between
the received mouse coordinates and previously received
mouse coordinates; and

20 a function that transmits relative value data to
a corresponding one of the computers.

8. A computer system comprising:

a switching device that selectively switches
25 connections to a predetermined terminal among a
plurality of terminals, and can be remote-controlled
over a network, the switching device including: a
network interface circuit to be connected to the
network; an image processing unit that includes an
30 image compression circuit for compressing image
signals; and a controller that changes a compression
method or compression rate to be used at the image
compression circuit, in accordance with a congestion
level of the network;

35 a plurality of computers that are connected to
the switching device; and

a remote-control computer that is connected to

the switching device via the network.

9. A method of updating an image compression method or compression rate to be used in a switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers and can be remote-controlled over a network,
the method comprising the steps of:
10 calculating a congestion level of the network;
and
changing the image compression method or compression rate to be used in the switching device, in accordance with the calculated congestion level of the network.
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10. The method as claimed in claim 9, wherein the congestion level calculating step includes the step of calculating data flow per unit time from an operation period of a packet filtering function and the amount of data transmitted from a packet filtering circuit.
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11. The method as claimed in claim 9, further comprising the step of reporting the changed image compression method or compression rate to a remote-control computer.
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12. A method of updating an image compression method or compression rate to be used in a switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers and can be remote-controlled over a network,
30 the method comprising the steps of:
calculating a congestion level of the network,
the calculation being performed by a remote-control
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computer connected to the network;

determining the image compression method or
compression rate to be used in the switching device, in
accordance with the calculated congestion level of the
5 network; and

reporting the determined image compression method
or compression rate to the switching device.

13. A method of updating an image compression
10 method or compression rate to be used in a switching
device that selectively switches connections to a
predetermined terminal among a plurality of terminals
connected to computers and can be remote-controlled
over a network,

15 the method comprising the steps of:

calculating a congestion level of the network,
the calculation being performed by a remote-control
computer connected to the switching device via the
network; and

20 reporting the calculated congestion level of the
network to the switching device.

14. The method as claimed in claim 12, wherein
the congestion level calculating step includes the step
25 of calculating data flow per unit time from a measuring
period and the amount of packet data received within
the measuring period.

15. A method of determining an image
30 compression method or compression rate to be used in a
switching device that selectively switches connections
to a predetermined terminal among a plurality of
terminals connected to computers and can be remote-
controlled over a network,

35 the method comprising the steps of:

receiving a congestion level of the network from
a remote-control computer connected to the network; and

changing the image compression method or compression rate to be used in the switching device, in accordance with the received congestion level of the network.

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16. A method of updating an image compression method or compression rate to be used in a switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers and can be remote-controlled over a network,

the method comprising the steps of:

calculating a transmission period between the switching device and a remote-control computer that is connected to the switching device via the network; and

changing the image compression method or compression rate to be used in the switching device, in accordance with the calculated transmission period.

17. A method of updating an image compression method or compression rate to be used in a switching device that selectively switches connections to a predetermined terminal among a plurality of terminals connected to computers and can be remote-controlled over a network,

the method comprising the steps of:

calculating a congestion level of the network, the calculation being performed by the switching device;

calculating a congestion level of the network, the calculation being performed by a remote-control computer connected to the switching device via the network; and

changing the image compression method or compression rate to be used in the switching device, in accordance with the congestion levels of the network calculated in the foregoing steps.

18. A method of converting mouse coordinates that are to be used in a remote-control computer connected to a switching device via a network, the
5 switching device selectively switching connections to a predetermined terminal among a plurality of terminals connected to computers,
the method comprising the steps of:
acquiring an operation screen size displayed on
10 the remote-control computer;
inquiring of the switching device the screen size of one of the computers, and receiving the screen size of the computer from the switching device;
calculating coordinate scales from the operation
15 screen size and a computer screen resolution calculated from the screen size of the computer; and
converting the mouse coordinates into computer absolute coordinates, based on the calculated coordinate scales.

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19. A program product for causing a computer to update an image compression method or compression rate to be used in a switching device, comprising:
instructions for calculating a congestion level
25 of a network between the switching device and a remote-control computer; and
instructions for changing the image compression method or compression rate to be used in the switching device, in accordance with the calculated congestion
30 level of the network.

20. A program product for causing a computer to update an image compression method or compression rate to be used in a switching device, comprising:
35 instructions for calculating a congestion level of a network between the switching device and a remote-control computer that is connected to the switching

device via the network;

instructions for determining the image
compression method or compression rate to be used in
the switching device, in accordance with the calculated
5 congestion level of the network; and

instructions for reporting the determined image
compression method or compression rate to the switching
device.

10 21. A program product for causing a computer to
convert mouse coordinates, comprising:

instructions for acquiring an operation screen
size displayed on a remote-control computer;

15 instructions for inquiring of a switching device
the screen size of a computer, and receiving the screen
size of the computer from the switching device;

instructions for calculating coordinate scales
from the operation screen size and a computer screen
resolution calculated from the screen size of the
20 computer;

instructions for converting the mouse coordinates
into computer absolute coordinates, based on the
calculated coordinate scales; and

25 instructions for transmitting the computer
absolute coordinates to the switching device.

22. A computer-readable recording medium on
which a program for causing a computer to update an
image compression method or compression rate to be used
30 in a switching device is recorded,

the program including: instructions for
calculating a congestion level of a network between the
switching device and a remote-control computer; and
instructions for changing the image compression method
35 or compression rate to be used in the switching device,
in accordance with the calculated congestion level of
the network.